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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,677	01/12/2001	Hung-Kun Chen	60271-302701 (LEE1P027)	2714
7590	10/05/2004		EXAMINER ODOM, CURTIS B	
JC Patents Inc 4 Venture Suite 250 Irvine, CA 92618			ART UNIT 2634	PAPER NUMBER

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/759,677	<b>Applicant(s)</b> CHEN ET AL.	
	<b>Examiner</b> Curtis B. Odom	<b>Art Unit</b> 2634	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 January 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-79 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 70,71,75 and 77 is/are rejected.
- 7) ☒ Claim(s) 1-69,72-74,76,78 and 79 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 January 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because all elements of each drawing figure are suggested to be labeled (see Figs. 1, 3, 4, 5, and 7). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

*Specification*

2. The abstract of the disclosure is objected to because the word “hoppingly” is suggested to be deleted. Correction is required. See MPEP § 608.01(b).

3. The disclosure is objected to because of the following informalities:

a. Throughout the specification (including the drawings, Figs. 8 and 9), the form and legal phraseology often used in patent claims, such as "said" should be avoided.

b. Throughout the specification, the word “hoppingly” is suggested to be deleted.

c. Throughout the specification, including Figs. 8 and 9, the parentheses are suggested to be deleted containing the phrase beginning at “R(i)” and ending with “sequences”. For example, see page 3, lines 9-10 and 25-26.

d. On page 1, line 1, “FHSS” should be defined.

e. On page 1-page 2, line 1, “up grading” is suggested to be changed to “upgrading”.

f. On page 2, line 18, the word “slot” is suggested to be changed to “slots”.

g. On page 3, line 1, “collisionfrom” is suggested to be changed to “collision from”.

h. On page 4, the phrase “Fig. 10 illustrates a flow diagram of method 900” is suggested to be changed to “Fig. 10 illustrates a flow diagram of method 1000”.

i. On page 6, line 24, the phrase “If the channel have” is suggested to be changed to “If the channel has”.

j. On page 8, line 3, the word “backward” is suggested to be deleted.

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- k. On page 9, lines 12, 14, and 24, “k-th” and “p-th” are suggested to be changed to “kth” and “pth”.
- l. On page 9, line 15, “7-th” is suggested to be changed to “7<sup>th</sup>”.
- m. On page 9, line 20, the phrase “threshold is” is suggested to be changed to “threshold are”.
- n. On page 12, line 16, “mapping circuit 404” is suggested to be changed to “mapping circuit 304”.
- o. On page 13, line 12, “sequences.” is suggested to be changed to “sequences,”.
- p. On page 17, line 25 “first selector103” is suggested to be changed to “first selector 103”.

Appropriate correction is required.

### ***Claim Objections***

- 4. Claims 1-79 are objected to because of the following informalities:
  - a. In claims 1-79, the word “hopingly” is suggested to be deleted.
  - b. In claims 1-79, the labeling of each step is suggested to be changed to letters (a, b, and c), instead of numerals (1.1, 1.2, 1.3, etc).
  - c. In claims 1-79, the phrase “in frequency hopping spread spectrum communication system” is suggested to be changed to “in a frequency hopping spread spectrum communication system”.

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d. In claims 1, 2, 34, and 35, the phrase “data collision ratio  $R(i)$ s” is suggested to be changed to “data collision ratios  $R(i)$ ”.

e. In claims 1, 2, 67-74, and 78, the phrase “denoting pth partition” is suggested to be changed to “denoting a pth partition”.

f. In claims 2, 3, 35, 36, and 70, the phrase “the highest to the lowest” is suggested to be changed to “a highest to a lowest”.

g. In claims 2, 3, 35, 36, 70, and 74, the phrase “the T is a predetermined” is suggested to be changed to “T is a predetermined”.

h. In claim 4, the phrase “claim 1 or 2 or 3” is suggested to be changed “claims 1, 2, or 3”.

i. In claims 5, 14, 28, 38, 47, and 61, the phrase “counting number of” is suggested to be changed to “counting a number of”.

j. In claims 10, 18, 43, and 52, the phrase “the relative frequency of occurrence” is suggested to be changed to “a relative frequency or occurrence”.

k. In claims 29 and 62, the phrase “the third sequence” is suggested to be changed to “a third sequence”.

l. In claim 37, the phrase “claim 34 or 35 or 36” is suggested to be changed to “claims 34 or 35 or 36”.

m. In claim 56, the phrase “includes step of” is suggested to be changed to “includes the step of”.

n. In claims 67, 69, 71, 73, 76, and 78, the parentheses are suggested to be deleted containing the phrase beginning at “ $R(i)$ ” and ending with “sequences”.

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Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 75 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 75 recites the limitation “mapping the first hopping sequence by the partition sequence to get the second hopping sequence, wherein the mapping translates an input channel number A in the first hopping sequence to an output channel number B within the corresponding partition in the partition sequence in a predetermined manner”. However, after reviewing the specification, particularly page 11, lines 16-23, the claim limitation “wherein the mapping translates an input channel number A in the first hopping sequence to an output channel number B within the corresponding partition in the partition sequence in a predetermined manner” was not described in a such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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8. Claims 70 and 71 recite the limitation “step 2.1” in claim 70. There is insufficient antecedent basis for this limitation in the claim.

9. Claim 77 recites the limitation “step 3.1”. There is insufficient antecedent basis for this limitation in the claim.

### ***Allowable Subject Matter***

10. Claims 1-69, 72-74, 76, 78, and 79 are allowable over prior art references if above objections are overcome because related references do not disclose measuring data collision ratios corresponding to partitions of channels used for frequency hopping, wherein the data collision ratios are used to create a frequency hopping sequence from the partition of channels.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Park et al. (U. S. Patent No. 5, 970, 055) discloses a frequency hopping system which generates a hopping sequence based on time information of the channels.

Emi (U. S. Patent No. 5, 541, 954) discloses a frequency hopping system wherein a channel usage is dependent upon the amount of errors calculated on the channel.



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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Curtis B. Odom whose telephone number is 571-272-3046. The examiner can normally be reached on Monday- Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Curtis Odom  
September 30, 2004



**STEPHEN CHIN**  
**SUPERVISORY PATENT EXAMINER**  
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